CLAIMS

1. A transfer device, characterized by comprising:

a carriage running along a horizontal rail:

a vertical column connected rigidly to the carriage, and extending above and below the carriage;

a table having a stroke capable of moving above and below the carriage, and lifting up and down along the vertical carriage;

a drivingly running mechanism incorporated into the carriage so that the carriage can be run; and

a drivingly lifting mechanism incorporated into the vertical column or the table so that the table can be lifted up and down,

objects being transferred in vertical and horizontal direction in a state of being placed on the table.

2. The transfer device according to claim 1, characterized in that a ring-like rail is used as the horizontal rail, and is arranged along the horizontal plane,

an outer frame carriage forming an internal space is used as the carriage, and is supported to the ring-like rail at a plurality of portions of the carriage,

a plurality of vertical columns is arranged in the ring-like rail along an inner periphery of the carriage,

the vertical column and the carriage are connected

rigidly to each other,

the table is arranged between the vertical columns, and is passed through the internal space of the carriage so that the table is lifted up and down along the vertical columns, and

the carriage is run and rotated along the ring-like rail.

SUB A2

3. The transfer device according to claim 2, characterized in that the plurality of carriages is combined with the plurality of horizontal rails,

the horizontal rails are vertically arranged in parallel at a predetermined interval so that the carriage is supported to the horizontal rail,

the vertical column is connected rigidly to the carriage at a height position of the horizontal rail, and

a plurality of object carry-in positions is provided around the horizontal rail throughout plural floors so that the objects are transferred to and carried in the carry-in position.

4. The transfer device according to claim 3, characterized in that up-and-down both sides of an object carry in-and-out floor are provided with the carriage, the horizontal rail, the vertical column and the table.

SUB A3

5. The transfer device according to claim 1,

SUB A3 > characterized in that a pair of linear rails is used as the horizontal rail, and is horizontally arranged in parallel at a predetermined interval,

an outer frame carriage forming an internal space is used as the carriage, and is arranged between the linear rail so that the carriage is supported to the linear rail,

a plurality of vertical columns is arranged between the linear rails along an inner periphery of the carriage,

the vertical column and the carriage are connected rigidly to each other,

the table is arranged between the vertical columns, and is passed through the internal space of the carriage so that the table is lifted up and down along the vertical columns, and

the carriage is run and moved along the linear rail.

6. The transfer device according to claim 5, characterized in that the plurality of carriages is combined with the plurality of horizontal rails,

the horizontal rails are vertically arranged in parallel at a predetermined interval so that the carriage is supported to the horizontal rail,

the vertical column is connected rigidly to the carriage at a height position of the horizontal rail, and

a plurality of object carry-in positions is provided

around the horizontal rail throughout plural floors on both sides of a two-dimensional transfer path in vertical and horizontal directions of the objects so that the objects are transferred to and carried in the carry-in position.

7. The transfer device according to claim 6, characterized in that up-and-down both sides of an object carry in-and-out floor are provided with the carriage, the horizontal rail, the vertical column and the table.